

SOME BERKS COUNTY MINERALS.

BY EDGAR F. SMITH.

Ten years ago, the late Ex-Congressman D. B. Brunner and Dr. Schoenfeld, of Reading, Pa., placed in my hands a number of minerals which they gathered from a railroad cut east of Reading. Considerable blasting had been done and a great deal of rock material had been removed. It was upon pieces of this rock and in its crevices that they obtained the minerals which I was to examine at my leisure and analyze if I cared so to do. At intervals these minerals have been submitted for study in the laboratory of the University of Pennsylvania, with results that have been more or less interesting.

LAUMONTITE.—The color was chalky-white and the lustre vitreous and pearly. Before the blow-pipe it fused quite readily to a white enamel. It was gelatinized when digested with hydrochloric acid. The specific gravity of the sample taken for analysis was found to be 2,253. As a result of analysis it showed 14.12 per cent. loss upon ignition; 11.89 per cent. CaO; 22.2 per cent. Al_2O_3 , and 52.12 per cent. SiO_2 .

APOPHYLLITE.—The crystals of the specimen examined were colorless to white, with a vitreous lustre and basal cleavage. When heated in a closed tube it exfoliated, became milk-white in color, and gave forth much water and showed a slight acid reaction. Before a blow-pipe it fused to a plebby glass. It was decomposed by hydrochloric acid with the separation of silica, but it was not distinctly gelatinized. Its specific gravity was found to be 2,399. On analysis it showed:

SiO_2	52.03 per cent.
Al_2O_3	0.28 “
Fe_2O_3	Trace
CaO.....	25.11 “
Na_2O	0.71 “
K_2O	5.13 “
Ign.....	17.43 “

Another specimen of crystals distributed over prehnite gave a specific gravity of 2.37, and on analysis showed:

SiO_2	51.95 per cent.
$Al_2O_3 + Fe_2O_3$	2.94 “
CaO.....	23.68 “
K_2O	4.47 “
Na_2O	0.34 “
MgO.....	0.36 “
Ign.....	15.81 “

Several samples of stilbite were found as thin radiating layers of crystals upon the face of the rock. These crystals readily broke into flat pearly plates. They gave much water when heated in a closed tube and were decomposed by hydrochloric acid without the formation of a jelly. Before the blow-pipe they fused with swelling and intumescence to a white enamel. The specific gravity was found to be 2.12. Upon analysis there were found:

SiO ₂	54.27 per cent.
Al ₂ O ₃	17.24 "
CaO.....	7.81 "
Na ₂ O.....	1.81 "
Ign.....	19.56 "

Garnets, varying in color from black to green, brown to gray, transparent in thin sections with a greenish to brownish tint, were observed distributed through the rocks. The specimen analyzed showed a specific gravity of 3.6, and upon analysis gave:

SiO ₂	34.98 per cent.
Fe ₂ O ₃	26.82 "
FeO.....	0.37 "
Al ₂ O ₃	5.82 "
MnO.....	0.08 "
CaO.....	31.23 "
MgO.....	0.57 "

PYROXENE.—This appeared in light green colored crystals with a violet lustre. It fused quietly but with difficulty to a brown glass. It was insoluble in hydrochloric acid. The crystals showed the outward form of the hexagonal system. The specific gravity of the specimen analyzed was found to be 3,187. Its analysis showed:

SiO ₂	52.23 per cent.
Al ₂ O ₃	3.58 "
FeO.....	2.45 "
MnO.....	1.55 "
CaO.....	20.00 "
MgO.....	18.31 "
Ign.....	1.79 "

CHABAZITE.—The crystals were colorless or white. When heated in a closed tube they gave out much water. They were decomposed by hydrochloric acid without the formation of a jelly. They fused before the blow-pipe to a plebby glass. The specific gravity was found to be 2.053. The analysis showed:

SiO ₂	48.59 per cent.
Al ₂ O ₃	18.49 "
CaO.....	8.78 "
MgO.....	0.05 "
Na ₂ O.....	1.41 "
K ₂ O.....	0.69 "
Ign.....	22.01 "

SCOLECITE.—The specimen analyzed consisted of a mass of radiating needles in which were mixed small, but distinct, crystals of calcite, particularly at the base of the tufts of needles. The crystals showed a silky lustre. They gave out much water when heated in a closed tube and curled up like a worm. They were readily gelatinized by means of hydrochloric acid. The specific gravity was found to be 2.27. The analysis showed:

SiO ₂	47.04	per cent.
Al ₂ O ₃	25.42	"
CaO.....	9.86	"
Na ₂ O.....	4.77	"
Ign.....	13.60	"

So far as the writer is aware, this represents the first notice of the occurrence of this particular mineral in the State of Pennsylvania. All the others have been obtained at various points in Berks County, which has proved to be a most fruitful field for many mineral varieties.